Is it not more probable that emotional manifestations are simple reflex acts, and that their occurrence on slight cause may indicate not a diseased "emotional centre," but a disturbance in the inhibitory tracts which control the reflex centres ? M. A. S.

The Concentration of the Blood as a Condition of Stimulus for the Central Nervous System.

(*Lo Sperimentale*, May, 1887.)

At the Royal Physiological Laboratory at Florence DR. IRO NOVI made some interesting experiments upon animals to show the effects of concentration of the blood on the nervous system. To do this he injected into the jugular veins of dogs a ten per-cent solution of chloride of sodium, withdrawing from the carotid a similar amount of normal blood. When the amount of chloride of sodium thus added was equivalent to double that found in the blood normally, convulsions occurred in all the muscles of the body.

2. In similar conditions, it did not change hæmoglobin into methæmoglobin. The action in this respect was different from that demonstrated by Marchand for the alkaline chlorates.

3. The peripheral nervous apparatus, muscles and nerves, are not influenced by this condition of the blood, and in the central nervous system, neither the spinal cord nor the medulla, but only the brain is affected.

4. The loss of water which the brain has undergone, especially the gray substance, is the cause of the musculo-nervous system attaining to such a high pitch of excitation.

5. In all probability it is the same cause which produces the convulsions which accompany an analogous but pathological concentration of the blood, as for example in Asiatic cholera.

GRACE PECKHAM.

PATHOLOGY OF THE NERVOUS SYSTEM.

The Brain of the Deaf and Dumb.

J. WALDSCHMIDT. (*Allg. Zeitsch f. Psych.*, xliii., 4.)

Waldschmidt describes the brains of two deaf and dumb individuals. In both the operculum, inferior frontal convolution, temporal lobe, and island of Reil were imperfectly developed, and the deficiency was more noticeable in the left hemisphere. The island of Reil in both was noticeable on account of the lack of convolutions, its thinness, and the rudimentary appearance of its anterior portion, and these peculiarities were more marked on the left side. The author believes that such a deficiency in the island of Reil, by impairing the power of conduction of impulses between the temporal and frontal lobes, is sufficient to cause the condition of deafness and dumbness.

The subject needs further observations.

Chronic Progressive Ophthalmoplegia Externa, with a Description of a Special Group of Cells in the Oculomotor Nucleus. C. WESTPHAL. (*Arch. f. Psych.*, xviii., 846.)

This case is interesting because the number of autopsies so far made in ophthalmoplegia externa is very limited. The patient, a man 44 years of age, began to suffer from attacks of unconsciousness in 1881, which became quite frequent, each lasting several days. These were followed by mental symptoms of a hypochondriacal nature which caused his removal to an asylum. On admission, the existence of total loss of power in all the external eye muscles with divergent strabismus was discovered. There was double ptosis; the pupils did not react to light, but acted in accommodation. There was beginning atrophy of the left half of the tongue, paresis of the uvula, and evidence of locomotor ataxia. He died two years after admission, the symptoms persisting until death. The autopsy showed a degeneration of both third nerves, atrophy of the third nerve roots, so that no normal fibres were to be found in the crus in their position, and marked changes in the oculo-motor nuclei in their entire length. There was a want of cells in the nuclei, and the cells which were present were small, round, and without branches. But dorsad from the atrophic oculo-motor nuclei, and opposite their anterior portion, two groups of cells were found on each side of the raphé—one group lying near the median line (the median group), the other lying outside of the first (the lateral group). These groups were not affected by the atrophy. Westphal finds no description of these groups in the works on anatomy, and thinks that they have escaped observation on account of their position, which is so far anterior as to be near the opening of the aqueduct of Sylvius into the third ventricle. He is inclined to consider that the function of these groups is to control the acts of accommodation and of pupil reflex to light, and he explains the lack of reaction to light in this case by the existence of a spinal affection. The abducens nuclei were also atrophied in this case. The left hypoglossal nucleus was atrophic, and the sclerosis of the posterior columns of the cord diagnosticated during life was found.

The article closes with a discussion of recent observations on ophthalmoplegia externa, and is accompanied by drawings of the new groups of cells.

Syringomyelitis. R. WICHMANN. (*Neurol. Centralbl.*, 1887, p. 343.)

The author has collected 33 cases of syringomyelitis—22 males, 11 females. The average age was 33 to 34 years. The average duration 3 to 4 years (from 2 to 7 years). In 6 cases the entire cord was involved. In 27 cases only a part of the cord, the lower cervical and upper dorsal regions being most frequently affected. As to the cross area involved, it was found that the posterior columns were very often invaded, the posterior horns less frequently, the anterior horns rarely. In 17 cases, the cord had a tumor-like swelling at the point affected. In 11 of these cases, the disease extended beyond the boundaries of this swelling. The cavity in the cord varied greatly in size. As to the symptoms there was much diversity. In a few cases they were wanting. In the large majority severe pain was present, greater in the extremities than in the body. Partial anæsthesia was present in 17 cases—the loss of pain sense being especially noticeable—in one case being general, in one case being so complete that fracture of the bones occurred without pain. The paralysis is the most constant symptom—usually of the legs, often of the arms, sometimes of both. Disturbance in the genito-urinary and rectal mechanisms is frequent. The sudden change and alternation of symptoms, rapid improvement and then relapse, is quite characteristic of central glioma, as of all intramedullary tumors. As to the therapeutics, the only comment is in regard to hot baths which were found to hasten the progress of the affection. M. A. S.

THERAPEUTICS OF THE NERVOUS SYSTEM.

On the use of Galvanism in the Treatment of certain forms of Insanity. By JOSEPH WIGGLESWORTH, M.D., Lond., Rainhill Asylum. (*Journal of Mental Sc.*, Oct., 1887.)

The author reports upon his experiences with the use of the galvanic battery in the treatment of insanity. By way of preface, he makes some very simple and elementary remarks upon the use of the galvanic battery. From his mode of application, we should say that it is not only important for *him* to use a galvanometer, but a good rheostat would be of good service, for he has used currents as strong as 25 (!) milliampères, applying the cathode to the forehead and the anode to the nape of the neck. We do not marvel that one patient resisted a good deal as the strength (of the current) was increased, or that one patient, suffering from melancholic stupor, developed a wild maniacal attack under this treatment; nor is it surprising that others "disliked the applications immensely." If the author wishes to study the effects of galvanism upon the insane, let him use milder currents, and we think he will obtain the same if not better results. The author concludes (1) "that whilst the use of galvanism to the head is a proceeding which is certainly *not* going to revolutionize the treatment of insanity, this agent is nevertheless one that is capable of doing much good in certain selected cases, and that, by its judicious (*sic*) employment, we may every now and then cure cases which would otherwise drift into hopeless chronicity. (2) The class of cases which offers the best field for the employment of this agent is that which includes examples of mental stupor and torpor cases, which are grouped under the specific designations of *melancholia attonita* and so-called 'acute dementia.'" B. S.